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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/731,924

12/09/2003

Andrew R. Adams

CISCO-8385

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21921

7590

05/14/2004

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EXAMINER

LAM, TUAN THIEU

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 05/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/731,924

Applicant(s)

ADAMS ET AL.

Examiner

Tuan T. Lam

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18 is/are allowed.
- 6) ☒ Claim(s) 1-17 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/20/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1- 17 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In this instant, the specification has failed to describe "a sensor connected to the control input of the VCO providing a measurement that varies as the magnitude of the control signal, **said sensor having more than two output values that vary as the magnitude of the control signal**" as called for in the independent claims 1, 2, 5, 6, 8, 10, 11, 13, 14 and 16. Figure 7 of the present invention is the intended figure to read on the limitations recited in the independent claims. Figure 7 shows a sense amplifier connected to the control input VCO. The output of the sense amplifier has two values, i.e, high and low, corresponding to the output of the low pass filter (713). The ADC (733) converts output of the sense amplifier to multi-bits digital signals. Although, the output of the ADC is a multi-bits signal, it still represents the two values of the output of the sense amplifier. Therefore, it is unclear as to how the sensor having more than two output values and what are those values. Clarification is required.

Claims 3, 4, 7, 9, 12, 15, 17 and 19 are also rejected under 35USC 112, first paragraph because of the technical deficiencies of claims 1, 2, 5, 6, 8, 10, 11, 13, 14, 16 and 18.

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 19, the recitation of "wherein the sensor is coupled to an analog to digital converter to provide a multi-bit digital signal" is indefinite because it is inconsistent with the limitation set forth in claim 1. Claim 1 calls for a sensor having more than two output values appears to read on elements 731, 727, 725, 733, 721. The recited analog to digital is clear a part of the sensor. Clarification is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6, 8-12, 14 and 16-17 insofar as being understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Mucke et al. (USP 6,211,745). Figure 12 shows a controller comprising a switchable banks of capacitors (300 of figure 9) connected to said capacitance input (406, 406' of figure 9) and having a switch input to provide a selectable range

of operating frequency for the VCO (output of the VCO 500 of figure 12), a sensor, insofar as understood (702 of figure 12), connected to the control input of the VCO (VTONE) providing an indication of the magnitude of the control signal (output of the sensor 702 of figure 12), said sensor having two output values that vary as the magnitude of the control signal, a controller connected the switch input (CALWORD connected to the switch input) and accepting the control signal magnitude indication, the controller providing control to the switchable capacitor bank (300 of figure 9) to maintain the operating point of the VCO close to the desirable operating point as called for in claims 1-4, 6, 8, 9, 10, 11, 12, 14 and 16-17.

Regarding claims 7 and 15, the digital control signal CALWORD is periodically updated to select the settings of the capacitor bank to provide a desired output frequency.

2. Claims 5 and 13, insofar as understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Mucke et al. (USP 6,211,745). Figure 11 shows a phase locked loop comprising a signal controlled oscillator (500 and details are shown in figure 12), a programmable frequency divider with the dividend M is programmed to provide a desired frequency divided signal, a first controller (not shown) for programming the dividend M of the programmable divider, a reference source (fr), a phase detector (602), a loop filter (604), a frequency range controller includes switchable elements (300 of figure 9) coupled to the SCO, a calibrator to provide the control signal CALWORD to the switch input, a sensor, insofar as understood (702 of figure 12), connected to the control input of the VCO (VTONE) providing an indication of the magnitude of the control signal (output of the sensor 702 of figure 12), said sensor having two output values that vary as the magnitude of the control signal second controller (300), a second controller connected the switch input (CALWORD connected to the switch input) and accepting the control

signal magnitude indication, the second controller providing control to the switchable capacitor bank (300 of figure 9) to maintain the operating point of the VCO close to the desirable operating point as called for in claims 5 and 13.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-17 and 19 are rejected under the judicially created doctrine of double patenting over claims 1-10 of U. S. Patent No. 6,686,804 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

Regarding claims 1-17 of the present invention, claim 6 of USP 6,686,804 recites a SCO (column 11, line 17), programmable frequency divider (column 11, line 18), first controller (column 11, line 21), a reference source (column 11, line 22), a phase detector (column 11, line 23), a loop filter (column 11, line 27), a frequency range controller (column 11, line 31), a

calibrator (column 11, line 35), switchable bank of capacitors (column 11, lines 31-34), a sensor (column 11, lines 36-38), a controller (column 11, lines 39-42), calibrator and a calibrator table (column 11, lines 43-47).

Regarding claims 1 and 19 of the present invention, claim 1 of USP 6,686,804 recites a switchable bank of capacitors (column 10, lines 24-26), a sensor (column 10, lines 27-30), a controller (column 10, lines 32-37), a ADC (column 10, lines 37-40).

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Allowable Subject Matter

5. Claim 18 is presently allowed.

Conclusion

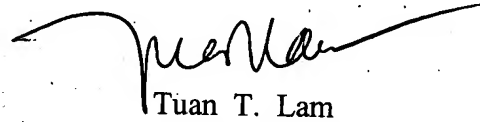
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In this regard, applicant's cited prior art has been carefully considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Lam whose telephone number is 571-272-1744. The examiner can normally be reached on Monday to Friday (7:30 am to 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY P CALLAHAN can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan T. Lam
Primary Examiner
Art Unit 2816

5/12/2004